News Release

Defense Advanced Research Projects Agency

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DARPA DEMONSTRATES CANTILEVERED RAILGUN FOR ELECTROMAGNETIC LAUNCH OF MORTAR ROUNDS

A full-scale, fully cantilevered electromagnetic railgun developed by the Defense Advanced Research Projects Agency (DARPA) has successfully launched a full-sized projectile, with size and weight similar to a 120mm mortar, at speeds of 430 meters-per-second. The railgun is the largest caliber supersonic railgun in the world and the first-ever successful full-scale cantilevered railgun to shoot a mortar-size projectiles.

The railgun is 2.4 meters long and weighs 950 kilograms. It is fully cantilevered from the breech end without visible droop. A cantilevered design is important because fieldable gun designs will need the ability to change aiming on a shot-to-shot basis. Built-in muzzle shunts quickly extinguish muzzle arc and reduce muzzle flash by providing an alternate current path.

The system has been demonstrated with reduced-mass projectiles to velocities around 550 meters-per-second and full-mass projectiles weighing 16.6 kilograms to 430 meters-per-second. More than 30 projectile launches have been conducted during this program, which began in 2005. Testing of the full-scale railgun began in mid-2007.

This DARPA-sponsored project has been conducted by researchers from the Institute for Advanced Technology at the University of Texas at Austin. The ultimate goal is to be able to launch a slightly modified M934 mortar projectile jointly developed with the U.S. Army's Armament, Research and Development and Engineering Center. Test launches of the M934 mortar projectile are scheduled for April to June 2008.

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